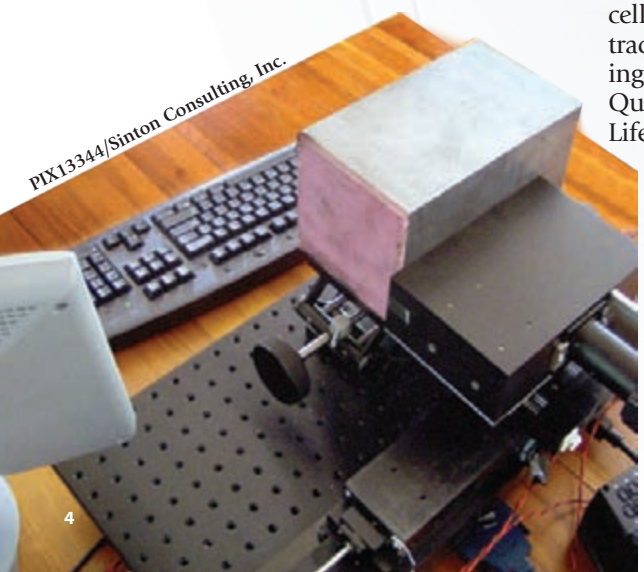
Awards & Honors

R&D 100 Awards

NREL won two R&D100 awards from *Research & Development (R&D)* Magazine in 2005. These awards recognize what the magazine editors consider to be the most significant products introduced into the marketplace over the past year. NREL won the awards for its work in advancing residential energy analysis software and improving the testing of silicon used in solar cell production.

Advances in Residential Energy Analysis The first R&D100 award recognizes the software application called TREAT—Targeted Residential Energy Analysis Tools—created by NREL and the New York State Energy Research and Development Authority (NYSERDA) and its partners. This software is a comprehensive energy analysis tool that models building energy consumption and identifies the most cost-effective energy-efficiency upgrades for both single and multifamily buildings. TREAT is based on SUNREL, a building energy simulation tool that NREL developed in the mid-1980s. Several innovations make TREAT particularly outstanding; for example, the software predicts occupant behavior, reports health and safety issues, and links users to outside data resources.

Advances in Silicon Testing The second R&D100 award highlights NREL's novel method of detecting impurities and defects in silicon boules, the material from which most commercial solar cells are made. Designed by subcontractor Ron Sinton of Sinton Consulting, the instrument is called the Sinton Quasi-Steady-State Minority-Carrier Lifetime Analyzer. It provides valuable information to manufacturers, identifying substandard silicon before it is fabricated into cells, and thereby increases the number of high-quality cells produced, while boosting manufacturing yields and reducing manufacturing costs. The evaluation system helps the photovoltaics industry be competitive by allowing manufacturers to produce consistently better silicon at the lowest possible price.



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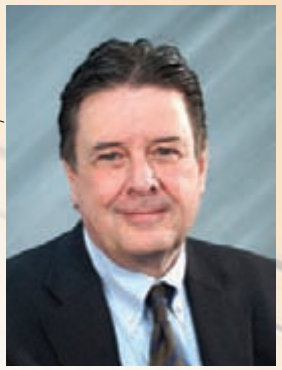
Technology Transfer Awards

The Federal Laboratory Consortium for Technology Transfer (FLC) recognized NREL with two "Notable Technology Development" awards in 2005 for technology transfer activities. The purpose of the FLC awards is to recognize achievements in moving technologies from the laboratory into the marketplace.

The first award recognized NREL's Thermal Comfort Project, which has resulted in several tools to analyze the efficiency of climate control in vehicles. The tools include the Advanced Automotive Manikin (ADAM), which mimics human physiological responses to hot and cold to predict how comfortable a vehicle occupant might feel. The project is managed by NREL's Center for Transportation Technologies and Systems.

The FLC also recognized this center's Advanced Vehicles and Fuels Project. The project created a partnership with vehicle manufacturers, fuel providers, and others to incorporate innovative technologies into the industry to reduce fuel use and emissions.

The FLC also awarded Lawrence "Marty" Murphy, manager of NREL's Enterprise Development Programs, a Distinguished Service Award. The award recognizes his leadership during the last nine years in building and promoting the program. In addition, he has worked tirelessly on the Industry Growth Venture Forums, which encourage the creation and growth of companies that promote clean, efficient, and renewable energy. The FLC is a nationwide network of federal laboratories that strives to link developed technologies and expertise with the private sector.



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Marty Murphy

Academy of Engineering Elects Kazmerski

Lawrence Kazmerski

Lawrence Kazmerski was elected a member of the National Academy of Engineering in 2005. Membership in the Academy is bestowed on engineers who have made outstanding contributions to engineering research, practice, or education, and to the pioneers of new and developing fields of technology. Kazmerski, who is the director of NREL's National Center for Photovoltaics, has worked at NREL since its inception. He has published more than 290 journal papers in the areas of solar cells, thin films, semiconductor materials and devices, surface and interface analysis, scanning probe microscopy, nanoscale technology, high-temperature superconductivity, and semiconductor defects. Kazmerski is also a Fellow of the Institute of Electrical and Electronics Engineers, the American Physical Society, and the American Vacuum Society. Under Secretary of Energy David Garman, invoking Kazmerski's oft-used nickname, said, "Kaz is known around the world for his leadership in solar energy research. NREL, DOE, and the nation are fortunate to have such a talented and tireless researcher who has devoted his life to this important work."

Ghirardi Among Nation's Brightest

The Hispanic Engineers National Achievement Awards Corporation (HENAAC) named NREL's Maria Ghirardi as one of the nation's best and brightest engineers and scientists. Ghirardi is a senior scientist at NREL and a Research Associate Professor at the Colorado School of Mines. Her research at NREL involves photobiological hydrogen production and includes developing a system for producing large quantities of active algal hydrogenase enzyme, a major breakthrough in research. She has authored 45 publications, and her research was the subject of a Discovery Channel program that aired in 2003. NREL

PIX13524/Warren Gretz

Maria Ghirardi

Director Dan Arvizu adds, "Not only is her research on alternative fuels helping set the stage for our nation's energy future, she is a role model for students who want to pursue careers in engineering, science, technology, and math."

Coutts Wins IEEE Award

Timothy J. Coutts received the 2005 William R. Cherry award from the Institute of Electrical and Electronics Engineers (IEEE) for his long-term contributions to the science and technology of photovoltaic energy conversion, including the dissemination of substantial publications and presentations. Coutts leads

PIX14683/Warren Gretz

Timothy Coutts

NREL's device development work, within the National Center for Photovoltaics. This involves developing and optimizing both single- and polycrystalline solar cells. The annual award honors photovoltaics pioneer William R. Cherry and is bestowed each year at the IEEE Photovoltaics Specialists Conference.

Lawson Appointed to Air Quality Commission

Colorado Governor Bill Owens appointed Douglas Lawson to serve on the state's Air Quality Control Commission. Lawson, principal scientist in NREL's Center for Transportation Technologies and Systems, manages the Environmental Science and Health Impacts program for the Department of Energy. He has completed the first year of his three-year appointment to the commission, which consists of nine members representing different disciplines and interests.

Lawson was appointed because of his strong technical background. "I bring the air pollution science background to the commission," Lawson said. The commission is a rule-making body that reviews rules and regulations proposed by the state and the U.S. Environmental Protection Agency. Lawson has published more than 70 journal articles on various aspects of air pollution and served on two National Research Council committees on air quality.

PIX14716/Mike Linenberger

Douglas Lawson